

## **Ludwig Institute for Cancer Research Stockholm Branch**

Research Groups

## Tissue Biology Group Group

**Tissue Biology** 

Ulf Eriksson Ph.D., Professor, Member

We are interested in signaling mechanisms underlying blood vessel growth, function and physiological integration in different tissues, such as in heart, skeletal muscle, brain and in tumors. Understanding how blood vessel growth, function, and physiological integration are controlled has implications for several major diseases including cardiovascular diseases, stroke, diabetes and cancer. Our research focuses on the roles of several growth factors, mainly of the VEGF/PDGF family, in these processes. In particular, we are interested in the roles of VEGF-B, and the two novel PDGF-C and PDGF-D factors. As a separate, but related, focus, a subgroup headed by Kristian Pietras is making efforts to map support functions performed by the stroma in growing tumors. This is done with the premise that decisive treatment benefit can be achieved by targeting multiple cell types and pathways that collectively sustain the growth of tumors.

## The Group

- · Cunha, Sara Ph.D. Student
- Ehnman, Monika Ph.D. Student
   Folestad, Erika Postdoctoral Fellow
- · Franco, Marcela Research Associate
- Franco, Marceia Research Associate
- Fredriksson, Linda Postdoctoral Fellow
- · Hägnan, Charlotte Ph.D. Student
- · Li, Hong Postdoctoral Fellow
- · Nilsson, Ingrid Postdoctoral Fellow
- · Pietras, Kristian Research Associate
- · Rezaian, Soheilla Senior Technician
- Rosenlew, Carolina Ph.D. Student
- Vanwildemeersch Maarten Postdoctoral Fellow
- · Wang, Xun Ph.D. Student

Exhibit 1

## Selected Publications

- Pontén, A, Folestad, E, Pietras, K, and Eriksson, U. PDGF-D induces cardiac fibrosis and proliferation of vascular smooth muscle cells in heart-sepcific transgenic mice. Circulation Research 11:1036-1045, 2005
- Fredriksson, L, Li, H, Fieber, C, Li, X, and Eriksson, U. Tissue-type plasminogen activator (tPA) is a potent activator of PDGF-CC. EMBO Journal 23, 3793-3802, 2004
- Bergsten, E, Uutela, M, Li, X, Pietras, K, Östman, A, Heldin, C-H, Alitalo, K, Eriksson, U. PDGF-D is a specific and protease-activated ligand for the PDGF β -receptor. Nature Cell Biology. 3: 512-516, 2001
- Aase, K, von Euler, G, Li, X, Pontén, A, Thorén, P, Cao, R, Cao, Y, Olofsson, B, Gebre-Medhin, S, Pekny, M, Alitalo, K, Betsholtz, C, and Eriksson, U. VEGF-B deficient mice display an atrial conduction defect. Circulation 104:358-364, 2001
- Li, X, Pontén, A, Aase, K, Karlsson, L, Abramsson, A, Uutela, M., Bäckström, G., Hellström, M, Boström, H, Li, H., Soriano, P., Betsholtz, C, Heldin, C.-H., Alitalo, K, Östman, A, and Eriksson, U. PDGF-C is a new protease-activated ligand for the PDGF-α receptor. Nature Cell Biology 2: 302-309, 2000
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